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ATMI LEGAL FAX 203-797-2544

NO. 1023 P. 1/9

1764

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To: Examiner Virginia Monoharan Fax: (703) 872-9306
From: Mag Chappuis Date: August 13, 2004
E-mail: Mchappuis@atmi.com Pages: 9
Re: Response to April 6, 2004 Office Action in U.S. Patent Application No. 10/015,326 cc: Mimi Yang (919) 419-9354

OFFICIAL

OFFICIAL COMMUNICATION

AMENDMENT RESPONDING TO APRIL 6, 2004 OFFICE ACTION IN U.S. PATENT
APPLICATION NO. 10/015,326

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Examiner Manoharan:

Please find the following documents enclosed:
Response to April 6, 2004 Office Action - 8 sheets
Transmittal - 1 sheet

Please call 203-739-1435 if there are any problems with this transmittal.

Maggie Chappuis

ATMI, Inc.
7 Commerce Drive
Danbury, CT 06810
203-739-1435 (telephone)
203-797-2544 (facsimile)
ATMI Docket: ATM-515

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NO. 1023 P. 2/9

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Patent Application
ATM-515 (7486)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

OFFICIAL

In re United States Patent Application of:	Docket No.:	ATMI-515 (7486)
Applicant: XU, Chongying, et al.	Examiner:	Virginia MANOHARAN
Application No.: 10/015,326	Art Group:	1764
Date Filed: December 13, 2001	Confirm. No.:	2946
Title: METHOD FOR REMOVAL OF IMPURITIES IN CYCLIC SILOXANES USEFUL AS PRECURSORS FOR LOW DIELECTRIC CONSTANT THIN FILMS	Customer No.:	25559

FACSIMILE TRANSMISSION CERTIFICATE

ATTN: Examiner Virginia MANOHARAN

Fax No.: (703) 872-9306

I hereby certify that this document is being filed in the United States Patent and Trademark Office, via facsimile transmission to Mail Stop AF, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, on August 13, 2004, to United States Patent and Trademark Office facsimile transmission number (703) 872-9306.

9

Number of Pages (including cover)

Maggie Chappuis
Maggie Chappuis

August 13, 2004

Date

**RESPONSE TO APRIL 6, 2004 OFFICE ACTION
AND REQUEST FOR TWO-MONTH EXTENSION OF TIME UNDER 35 USC 1.136 (a)
IN UNITED STATES PATENT APPLICATION NO. 10/015,326**

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Patent Application
ATM-515 (7486)

In response to the April 6, 2004 Office Action in the above-identified application, please amend the claims of the above-identified U.S. patent application as in Section I (Amendments to Claims) at below:

Section I. (Amendments to Claims)

Please cancel claim 20, and amend claims 1-4, 9-19, and 21, as follows:

1. (Currently amended) A process for improving delivery reproducibility of a cyclosiloxane precursor to a chemical vapor deposition reactor, comprising the steps of:
 - (a) providing a cyclosiloxane precursor;
 - (b) treating said cyclosiloxane precursor, by reducing the concentration of water and optionally at least one impurity[[,]] from a said cyclosiloxane precursor, comprising contacting the cyclosiloxane precursor with an adsorbent bed material, so as to remove therefrom at least a portion of the water, and optionally the at least one impurity, to produce a purified cyclosiloxane precursor having a reduced level less than $< 0.001\%$ of water and optionally less than $< 0.001\%$ of the at least one impurity; and
removing the purified cyclosiloxane precursor from the adsorbent bed material
 - (c) vaporizing said purified cyclosiloxane precursor; and
 - (d) delivering vapor of said purified cyclosiloxane precursor to said chemical vapor deposition reactor,wherein treatment of the cyclosiloxane precursor functions to prevent or minimize premature polymerization of said cyclosiloxane precursor in the chemical vapor deposition reactor and associated delivery lines.
2. (Currently amended) The process according to claim 1, wherein said at least one impurity is selected from the group consisting of acidic and basic impurities.
3. (Currently amended) The process according to claim 1, wherein said at least one impurity is acidic.
4. (Currently amended) The process according to claim 1, wherein said at least one impurity is basic.